Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A single crystal silicon segment having two major, generally parallel surfaces, one of which is the front surface of the segment and the other of which is the back surface of the segment, a central plane between the front and back surfaces, a circumferential edge joining the front and back surfaces, a surface layer which comprises a first region of the segment below the front surface and a distance, D_1, as measured from the front surface and toward the central plane, and a bulk layer which comprises a second region of the segment between the central plane and the first region, the segment being characterized in that

the segment has a non-uniform distribution of minority carrier recombination centers, **the minority carrier recombination centers comprising a substitutional metal,** with the concentration of the centers in the bulk layer being greater than the concentration in the surface layer and with the centers having a concentration profile in which the peak density of the centers is at or near the central plane with the concentration generally decreasing from the position of peak density in the direction of the front surface of the segment and with the concentration generally decreasing from the position of peak density in the direction of the back surface of the segment.

Claim 2 (original) The segment of claim 1 having a carbon concentration which is less than about 1×10^{16} atoms/cm^3.

Claim 3 (original) The segment of claim 1 having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

Claim 4 (original) The segment of claim 1 having a thickness ranging from about 500 microns to about 800 microns.

Claim 5 (original) The segment of claim 1 having a thickness ranging from about 800 microns to about 1200 microns.

Claim 6 (previously amended) The segment of claim 1 wherein the concentration of minority carrier recombination centers in the surface layer is less than about 1×10^{11} centers/cm^3.

Claim 7 (previously amended) The segment of claim 1 wherein the concentration of minority carrier recombination centers in the surface layer is less than about 1×10^{13} centers/cm^3.

Claim 8 (original) The segment of claim 1 wherein the distance D_1 is at least about 10 microns.

Claim 9 (original) The segment of claim 1 wherein the distance D_1 is at least about 30 microns.

Claim 10 (original) The segment of claim 1 wherein the distance D_1 is at least about 50 microns.

Claim 11 (original) The segment of claim 1 wherein the distance D_1 is at least about 100 microns.

Claim 12 (original) The segment of claim 1 wherein the front surface is polished.

Claim 13 (currently amended) A single crystal silicon segment containing minority carrier recombination centers and having two major, generally parallel

surfaces, one of which is the front surface of the segment and the other of which is the back surface of the segment, a central plane between the front and back surfaces, the recombination centers **comprising a substitutional metal and** having a non-uniform distribution between the front and back surfaces with a maximum concentration of the recombination centers being in a region which is between the front surface and the central plane and nearer to the front surface than the central plane and with a minimum concentration of the recombination centers, which is less than the concentration of the recombination centers at the central plane and which is between the front surface and the maximum concentration, the concentration of the recombination centers increasing from the minimum concentration to the maximum concentration and decreasing from the maximum concentration to the central plane.

Claim 14 (original) The segment of claim 13 having a carbon concentration which is less than about 1×10^{16} atoms/cm^3.

Claim 15 (original) The segment of claim 13 having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

Claim 16 (original) The segment of claim 13 having a thickness ranging from about 500 microns to about 800 microns.

Claim 17 (original) The segment of claim 13 having a thickness ranging from about 800 microns to about 1200 microns.

Claim 18 (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 5 microns form the front surface of the segment.

Claim 19 (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 10 microns form the front surface of the segment.

Claim 20 (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 20 microns form the front surface of the segment.

Claim 21 (original) The segment of claim 13 wherein the maximum concentration of recombination centers is within about 40 microns form the front surface of the segment.

Claim 22 (original) The segment of claim 13 wherein the front surface is polished.

Claim 23-34 (canceled)

Claim 35 (new) The segment of claim 3, the segment being in the form of a single crystal silicon wafer.

Claim 36 (new) The segment of claim 35, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 37 (new) The segment of claim 3, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 38 (new) The segment of claim 1, the segment being in the form of a single crystal silicon wafer.

Claim 39 (new) The segment of claim 38, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 40 (new) The segment of claim 1, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 41 (new) The segment of claim 1 wherein the substitutional metal is platinum.

Claim 42 (new) The segment of claim 41, the segment having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

Claim 43 (new) The segment of claim 42, the segment being in the form of a single crystal silicon wafer.

Claim 44 (new) The segment of claim 43, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 45 (new) The segment of claim 41, the segment being in the form of a single crystal silicon wafer.

Claim 46 (new) The segment of claim 45, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 47 (new) The segment of claim 41, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 48 (new) The segment of claim 47, the segment having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

Claim 49 (new) The segment of claim 15, the segment being in the form of a single crystal silicon wafer.

Claim 50 (new) The segment of claim 49, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 51 (new) The segment of claim 15, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 52 (new) The segment of claim 13, the segment being in the form of a single crystal silicon wafer.

Claim 53 (new) The segment of claim 52, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 54 (new) The segment of claim 13, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 55 (new) The segment of claim 13 wherein the substitutional metal is platinum.

Claim 56 (new) The segment of claim 55, the segment having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.

Claim 57 (new) The segment of claim 56, the segment being in the form of a single crystal silicon wafer.

Claim 58 (new) The segment of claim 57, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 59 (new) The segment of claim 55, the segment being in the form of a single crystal silicon wafer.

Claim 60 (new) The segment of claim 59, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 61 (new) The segment of claim 55, the segment having an asymmetric recombination center profile relative to the central plane of the segment.

Claim 62 (new) The segment of claim 61, the segment having a carbon concentration which is less than about 5×10^{15} atoms/cm^3.